



## Chemistry

Time Remaining: 45/45 (Minutes)

Q.1

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which of the following statements about 12 g sample of C-12 is incorrect?

- A) The number of C-atoms is  $6.022 \times 10^{23}$
- B) The number of C-atoms is the same as number of the atoms in 4.0 g of  ${}^4_2\text{He}$
- C) The number of C-atoms is the same as electrons in 1.0 g of  $\text{H}_2$
- D) The number of C-atoms is the same as electrons in 16.0 g of  ${}^{32}_{16}\text{S}$

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Correct Answer:

☐ A ☐ B ☐ C ☐ D

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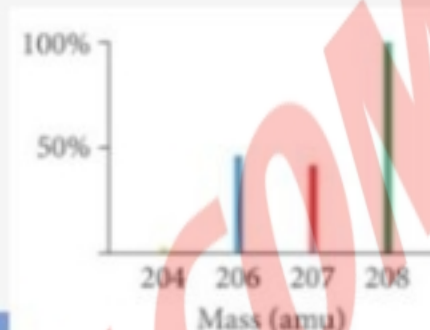
Time Remaining: 44/45 (Minutes)

Q.2

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

The mass spectrum of lead is shown  
What quantities are represented  
by x-axis and y-axis?



Options	x-axis	y-axis
A)	Mass number	Relative abundance
B)	Mass number	Atomic number
C)	Atomic number	Height of peak
D)	Atomic number	Mass number

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 44/45 (Minutes)

Q.3

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Isotopes of an element possess:

- a. Same physical and chemical properties
- b. Different physical and chemical properties
- c. Same physical but different chemical properties
- d. Same chemical but different physical properties

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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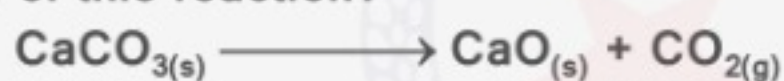
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Q.4

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

When lime stone ( $\text{CaCO}_3$ ) is roasted, quicklime ( $\text{CaO}$ ) is produced according to the following equation. The actual yield of  $\text{CaO}$  is 0.5kg when 1kg of limestone is roasted. What is the percentage yield of this reaction?



A) 89.3%

B) 85.2%

C) 80.1%

D) 87.3%

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 44/45 (Minutes)

Q.5

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which of the following statement is correct:

- a. The no. of negative ions having group of atoms is less common
- b. The properties of an element mostly corresponded to the most abundant isotope of that element
- c. Elements with odd atomic number process more than two isotopes
- d. The current strength of each isotope of an element gives mass no.

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 44/45 (Minutes)

Q.6

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

A sample in the ionization chamber of mass spectrometer is ionized by:

- A) Electrons  
C) neutron

- B) Proton  
D) nucleus

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Correct Answer:

- ☒ A ☐ B ☐ C ☐ D

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Time Remaining: 44/45 (Minutes)

Q.7

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

One mole of  $\text{CO}_2$  contains:

- a.  $6.022 \times 10^{23} \times 2$  atoms of oxygen
- b. 22-moles electrons
- c.  $6.022 \times 10^{23}$  atoms of carbon
- d. Both b and c

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 44/45 (Minutes)

Q.8

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Total number of atoms present in 49.0g  $\text{H}_2\text{SO}_4$  are:

- A)  $7 \times 6.022 \times 10^{23}$  number of atoms
- B)  $7 \times 3.011 \times 10^{23}$  number of atoms
- C) It contains 1g molecules of  $\text{H}_2\text{SO}_4$
- D) It contains 0.6g atoms of  $\text{H}_2\text{SO}_4$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 44/45 (Minutes)

Q.9

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Mass spectrum is obtained by plotting graph between:

- a.  $m/e$  along ordinate and relative number of ions along abscissa
- b.  $m/e$  along x-axis and relative number of ions along y-axis
- c. relative atomic mass along x-axis and  $m/e$  along y-axis
- d. none of the above

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 43/45 (Minutes)

Q.10

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

The number of moles of  $\text{CO}_2$  which contains 16 g of oxygen is

a. 0.25

b. 0.75

c. 1

d. 0.5

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 43/45 (Minutes)

Q.11

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which one of the following is not generally same for one mole of different gases at STP?

- a. Volume
- b. Number of molecules
- c. Molecular mass
- d. all of them.

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 43/45 (Minutes)

Q.12

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

4g  $H_2$  reacts with 32.0g  $O_2$  to produce water. Which of the following statements is correct?

- A)  $H_2$  - limiting reactant
- B)  $O_2$  - non-limiting reactant
- C) 2.0 mole water is produced
- D) 1 mole water is produced.

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 43/45 (Minutes)

Q.13

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which of the following is correct sequence of processes involved in modern mass spectrometer?

- A) Vaporization, ionization, electric field, amplification, recording, ion collector, magnetic field.
- B) Ionization, electric field, ion collector, vaporization ion collector, recording, amplification.
- C) Vaporization, -ionization, electric field, magnetic field, ion collector, amplification and recording.
- D) all of them

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 43/45 (Minutes)

Q.14

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

The volume occupied by 1.6g of  $O_2$  at STP is:

a.  $2.24dm^3$

b.  $22.4dm^3$

c.  $1.12dm^3$

d.  $112dm^3$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 43/45 (Minutes)

Q.15

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which of the following statements is incorrect for isotopes of an element?

- A) They have different position in the modern periodic table
- B) They have different mass number
- C) They have different physical properties
- D) They have different half-life

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 43/45 (Minutes)

Q.16

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Chemistry Unit Wise

The electrometer is also called as:

- A) Ion producer      B) ion separator  
C) ion collector      D) All of given

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Correct Answer:

- ☒ A    ☐ B    ☐ C    ☐ D

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Time Remaining: 43/45 (Minutes)

Q.17

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which information obtained from electrometer gives the relative abundance of ions of a definite  $m/e$  value?

- A) Direction of flow of electric current
- B) Strength of electric current
- C) Both strength and direction of flow of electric current
- D) All of given

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 42/45 (Minutes)

Q.18

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

The combustion analysis of an organic compound shows 60% carbon, 8% hydrogen and 32% oxygen. If the molecular mass of the given organic compound is 200, then the molecular formula of the organic compound is (Ar of C = 12amu, H = 1 amu and O = 16amu)

A)  $C_{10}H_{16}O_4$

B)  $C_8H_{16}O_4$

C)  $C_{16}H_{14}O_4$

D)  $C_5H_8O_2$

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Correct Answer:



A



B



C



D

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Time Remaining: 42/45 (Minutes)

Q.19

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which represent the simple ratio of atoms present in a compound?

- a. Molecular formula
- b. formula unit
- c. Gravimetric analysis
- d. Physical analysis

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 42/45 (Minutes)

Q.20

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which of the following contains one mole of the stated particles?

- A) Chlorine molecules in 35.5g of  $\text{Cl}_2$  gas
- B) Electrons in 1g of hydrogen gas
- C)  $\text{H}^+$  ions in  $1\text{dm}^3$  of  $1\text{ mole dm}^{-3}$  of aqueous solution of  $\text{H}_2\text{SO}_4$
- D) Oxygen atoms in  $22.4\text{ dm}^3$  of oxygen gas at STP

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 42/45 (Minutes)

Q.21

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Total number of atoms present in 17g of hydrogen peroxide is ( $N = 6.02 \times 10^{23}$ ):

A)  $1.2 \times 10^{24}$

B)  $1.8 \times 10^{25}$

C)  $6.02 \times 10^{23}$

D)  $1.6 \times 10^{26}$

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Correct Answer:



A



B



C



D

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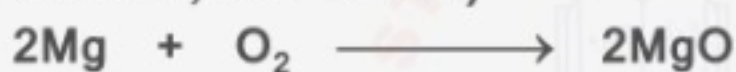
Q.22

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

0.5 mole of magnesium is burnt in excess oxygen. How much amount of MgO is produced in this reaction

(Mg = 24amu, O = 16amu)



A) 40g

B) 20g

C) 30g

D) 15g

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Correct Answer:



A



B



C



D

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## Chemistry

Time Remaining: 42/45 (Minutes)

Q.23

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which one of the following is a  $CO_2$  absorber?

- a. NaOH
- b. KOH
- c.  $Ca(OH)_2$
- d.  $MgCl_2$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 42/45 (Minutes)

Q.24

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which one of the following is not a water absorber?

- A) *conc*  $H_2SO_4$
- B) Anhydrous  $CuSO_4$
- C)  $CaCO_3$
- D)  $Mg(ClO_4)_2$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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## Chemistry

Time Remaining: 41/45 (Minutes)

Q.25

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which one of the following compound doesn't have same molecular and empirical formula?

- a.  $\text{CH}_3\text{COOH}$
- b.  $\text{C}_{12}\text{H}_{22}\text{O}_{11}$
- c.  $\text{CH}_3 - \text{CH}_2 - \text{OH}$
- d.  $\text{CH}_3 - \text{CH}_2 - \text{CHO}$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 41/45 (Minutes)

Q.26

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

For those compounds which have same molecular and empirical formula, the value of simple multiple 'n' is?

- a. 2  
c. 1

- b. 4  
d. 3

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Correct Answer:

- ☒ A ☐ B ☐ C ☐ D

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Time Remaining: 41/45 (Minutes)

Q.27

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

The value of simple multiple 'n' is:

- a. The ratio of atomic mass and molecular mass
- b. The ratio of molecular mass and empirical mass
- c. The ratio of empirical mass and molecular mass
- d. The ratio of molecular mass and atomic mass

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 41/45 (Minutes)

Q.28

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

One gram molecular mass of different substances expressed in grams must possess:

- a. Have different masses in them
- b. have same masses in them
- c. Some times same masses and some times different masses in them
- d. All given above

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 41/45 (Minutes)

Q.29

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

One mole of different compounds has:

- A) different masses and different number of molecules
- B) same masses but different number of molecules
- C) different masses but same number of molecules
- D) same masses as well as same number of molecules

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 41/45 (Minutes)

Q.30

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Which one of the following statement is not true about molecule?

- a. molecule can exist independently
- b. molecule is the largest particle of a pure substance
- c. molecule always consist of more than one atoms
- d. molecular size depends on number of atoms and shape of molecule

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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# Chemistry

Time Remaining: 40/45 (Minutes)

Q.31

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Molar volumes is  $22.414 \text{ dm}^3$  it is true:

- a. only when the gas is ideal
- b. only when the gas is non-ideal
- c. for ideal gas as well as for non-ideal gas
- d. sometimes true for ideal gas and some time true for non ideal gas

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 40/45 (Minutes)

Q.32

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

One mole of an ideal at room temperature and pressure (r.t.p.) occupies a volume of:

a.  $22\text{dm}^3$

b.  $20\text{dm}^3$

c.  $24\text{dm}^3$

d.  $26\text{dm}^3$

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 40/45 (Minutes)

Q.33

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

414  $dm^3$  of each gas at STP has :

- a. a same mass and same numbers of molecules
- b. a different mass and different numbers of molecules
- c. a different mass but the same number of molecules
- d. a same mass but different number of molecules

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 40/45 (Minutes)

Q.34

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

Many elements have fractional atomic masses. This is because:

- a. The mass of the atom is itself fractional
- b. Atomic masses are average masses of isobars
- c. Atomic masses are average masses of isotopes
- d. Atomic masses are average masses of isotopes proportion to their relative abundance

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 40/45 (Minutes)

Q.35

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

For a reaction  $X + 2Y \longrightarrow Z$ . The amount of Z formed by starting the reaction with 5 moles of X and 8 moles of Y:

- A) 5 moles      B) 8 moles  
C) 16 moles    D) 4 moles

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Correct Answer:

- ☒ A    ☐ B    ☐ C    ☐ D

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Time Remaining: 40/45 (Minutes)

Q.36

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

One mole of water and one mole of methane have an equal:

- A) mass
- B) number of atoms
- C) number of molecules
- D) number of formula units

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Correct Answer:

- ☒ A ☐ B ☐ C ☐ D

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## Chemistry

Time Remaining: 40/45 (Minutes)

Q.37

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

A compound has an empirical formula  $\text{CH}_2\text{Cl}$ , and molecular formula mass as  $99\text{g mol}^{-1}$ , identify the compound,

A)  $\text{C}_2\text{H}_5\text{Cl}$ B)  $\text{C}_4\text{H}_8\text{Cl}$ C)  $\text{C}_2\text{H}_4\text{Cl}_2$ D)  $\text{C}_2\text{H}_3\text{Cl}_3$ 

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 39/45 (Minutes)

Q.38

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

The Avogadro's Number is the number of:

- a. numbers of the molecules of  $H_2$  in 1 gram
- b. number of the molecules of  $CO_2$  in 44 grams
- c. number of atoms in  $CO_2$  in 44 grams
- d. number of oxygen atoms in  $CO_2$  in 44 grams

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 39/45 (Minutes)

Q.39

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

The empirical formula of a compound is  $CH_2O$ . What other information is needed to determine its molecular formula?

- a. %age composition of each element in compound
- b. density of the compound
- c. relative molecular mass of the compound
- d. boiling point of the compound

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Correct Answer:

☒ A ☐ B ☐ C ☐ D

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Time Remaining: 39/45 (Minutes)

Q.40

Test 1 Introduction to  
Fundamental chemistry

Chemistry Unit Wise

100g of  $\text{CaCO}_3$  is decomposed, the  $\text{CO}_2$  produced occupies a volume at STP.

a.  $2.2414 \text{ dm}^3$

b.  $22.414 \text{ dm}^3$

c.  $22414 \text{ dm}^3$

d.  $224014 \text{ dm}^3$

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Correct Answer:



A



B



C



D

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1.

Which of the following statements about 12 g sample of C-12 is incorrect?

A) The number of C-atoms is  $6.022 \times 10^{23}$

B) The number of C-atoms is the same as number of the atoms in 4.0 g of  ${}^4_2\text{He}$

C) The number of C-atoms is the same as electrons in 1.0 g of  $\text{H}_2$

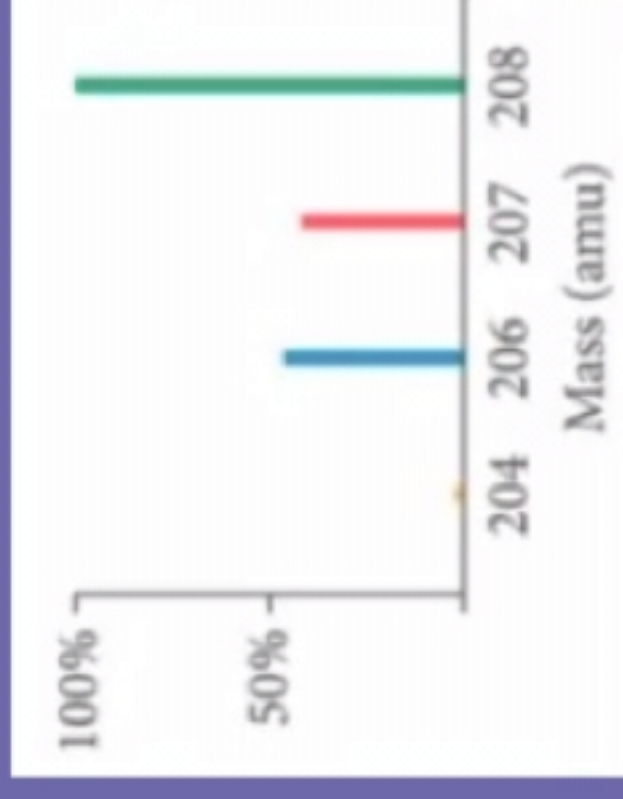
D) The number of C-atoms is the same as electrons in 16.0 g of  ${}^{32}_{16}\text{S}$



2.

The mass spectrum of lead is shown

What quantities are represented by x-axis and y-axis?



Options	x-axis	y-axis
A)	Mass number	Relative abundance
B)	Mass number	Atomic number
C)	Atomic number	Height of peak
D)	Atomic number	Mass number



3.

1. Isotopes of an element possess:

- a. Same physical and chemical properties
- b. Different physical and chemical properties
- c. Same physical but different chemical properties
- d. Same chemical but different physical properties



4.

When lime stone ( $\text{CaCO}_3$ ) is roasted, quicklime ( $\text{CaO}$ ) is produced according to the following equation. The actual yield of  $\text{CaO}$  is 0.5kg when 1kg of limestone is roasted. What is the percentage yield of this reaction?



A) 89.3%

B) 85.2%

C) 80.1%

D) 87.3%



5.

Which of the following statement is correct:

- a. The no. of negative ions having group of atoms is less common
- b. The properties of an element mostly corresponded to the most abundant isotope of that element
- c. Elements with odd atomic number process more than two isotopes
- d. The current strength of each isotope of an element gives mass no.



6.

A sample in the ionization chamber of mass spectrometer is ionized by:

- A) Electrons
- B) Proton
- C) neutron
- D) nucleus

7.

One mole of  $\text{CO}_2$  contains:

- a.  $6.022 \times 10^{23}$  x 2 atoms of oxygen
- b. 22-moles electrons
- c.  $6.022 \times 10^{23}$  atoms of carbon
- d. Both b and c



8.

Total number of atoms present in 49.0g  $\text{H}_2\text{SO}_4$  are:

- A)  $7 \times 6.022 \times 10^{23}$  number of atoms
- B)  $7 \times 3.011 \times 10^{23}$  number of atoms
- C) It contains 1g molecules of  $\text{H}_2\text{SO}_4$
- D) It contains 0.6g atoms of  $\text{H}_2\text{SO}_4$







9.

1. Mass spectrum is obtained by plotting graph between:

- a.  $m/e$  along ordinate and relative number of ions along abscissa
- b.  $m/e$  along x-axis and relative number of ions along y-axis
- c. relative atomic mass along x-axis and  $m/e$  along y-axis
- d. none of the above

10.

The number of moles of  $\text{CO}_2$  which contains 16 g of oxygen is

a. 0.25

b. 0.75

c. 1

d. 0.5



11.

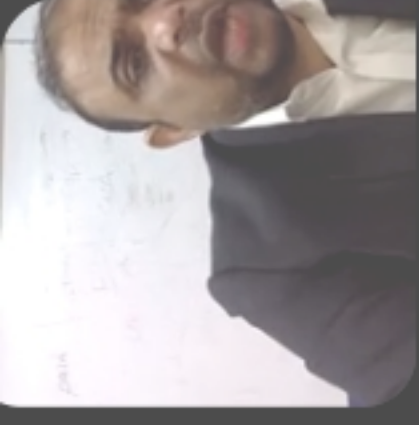
Which one of the following is not generally same for one mole of different gases at STP?

- a. Volume
- b. Number of molecules
- c. Molecular mass
- d. all of them.

12.

4g  $H_2$  reacts with 32.0g  $O_2$  to produce water.  
Which of the following statements is correct?

- A)  $H_2$ -limiting reactant
- B)  $O_2$ -non-limiting reactant
- C) 2.0 mole water is produced
- D) 1 mole water is produced.





13.

Which of the following is correct sequence of processes involved in modern mass spectrometer?

- A) Vaporization, ionization, electric field, amplification, recording, ion collector, magnetic field.
- B) Ionization, electric field, ion collector, vaporization ion collector, recording, amplification.
- C) Vaporization, -ionization, electric field, magnetic field, ion collector, amplification and recording.
- D) all of them





14.

The volume occupied by 1.6g of  $O_2$  at STP is:

a.  $2.24\text{dm}^3$

c.  $1.12\text{dm}^3$

b.  $22.4\text{dm}^3$

d.  $112\text{dm}^3$



15.

Which of the following statements is incorrect for isotopes of an element?

- A) They have different position in the modern periodic table
- B) They have different mass number
- C) They have different physical properties
- D) They have different half-life



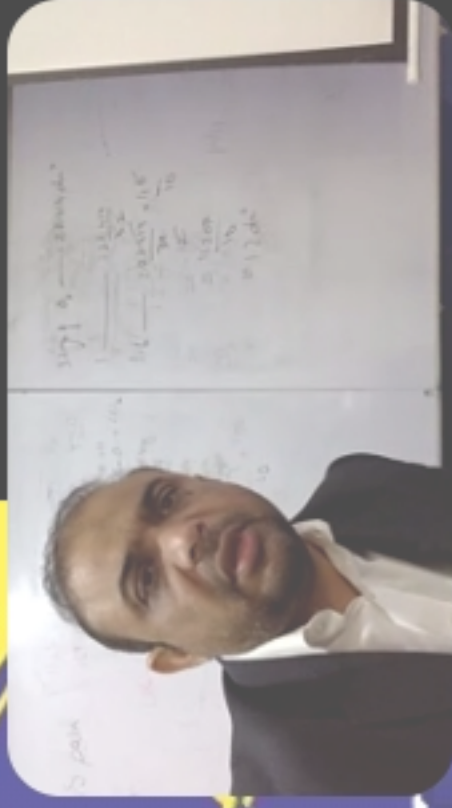


16. The electron multiplier is also called as:

- A) ion multiplier
- B) ion separator
- C) ion collector
- D) ion of given

direct

current





17.

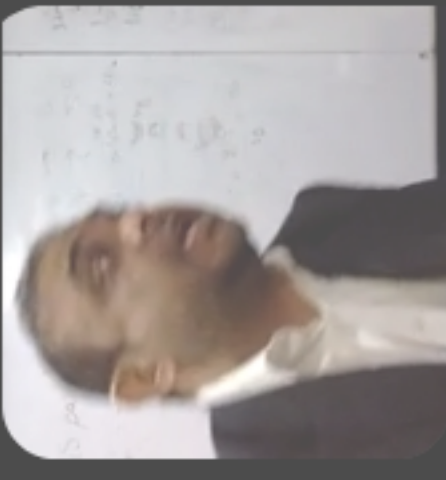
Which information obtained from electrometer gives the relative abundance of ions of a definite  $m/e$  value?

A) Direction of flow of electric current

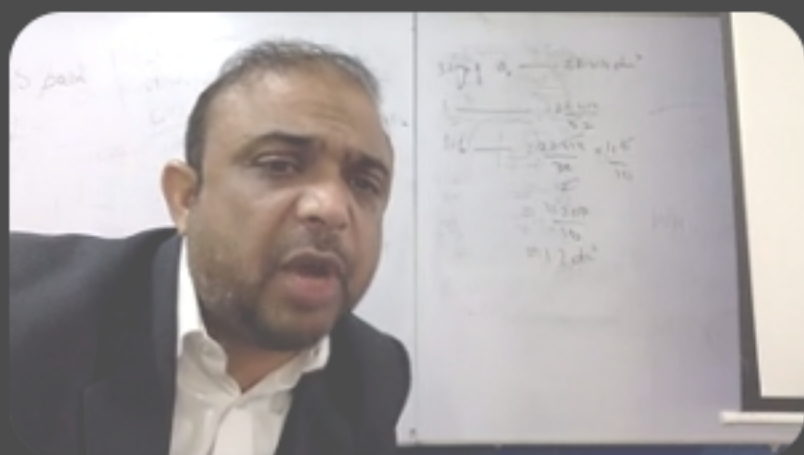
B) Strength of electric current

C) Both strength and direction of flow of electric current

D) All of given

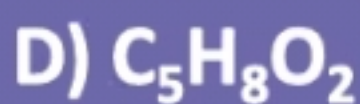
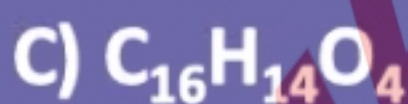
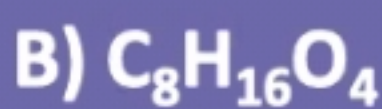




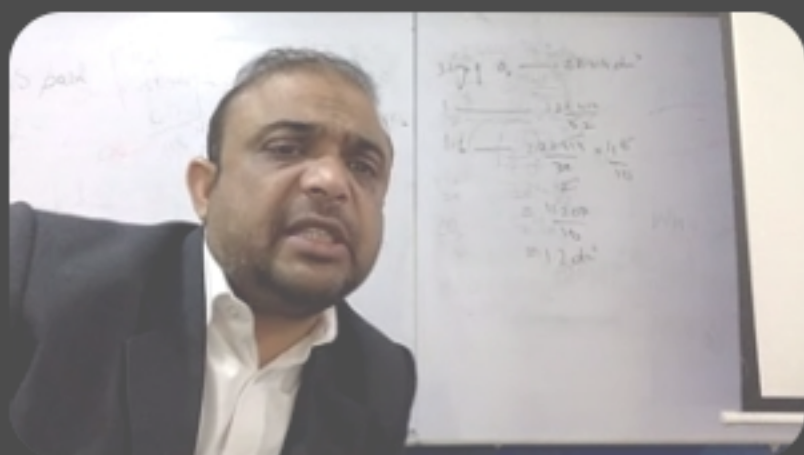


18.

The combustion analysis of an organic compound shows 60% carbon, 8% hydrogen and 32% oxygen. If the molecular mass of the given organic compound is 200, then the molecular formula of the organic compound is (Ar of C = 12amu, H = 1 amu and O = 16amu)

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19.

Which represent the simple ratio of atoms present in a compound?

- a. Molecular formula
- b. formula unit
- c. Gravimetric analysis
- d. Physical analysis

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20.

Which of the following contains one mole of the stated particles?

- A) Chlorine molecules in 35.5g of  $\text{Cl}_2$  gas
- B) Electrons in 1g of hydrogen gas
- C)  $\text{H}^+$  ions in  $1\text{dm}^3$  of  $1\text{ mole dm}^{-3}$  of aqueous solution of  $\text{H}_2\text{SO}_4$
- D) Oxygen atoms in  $22.4\text{ dm}^3$  of oxygen gas at STP

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Zoom

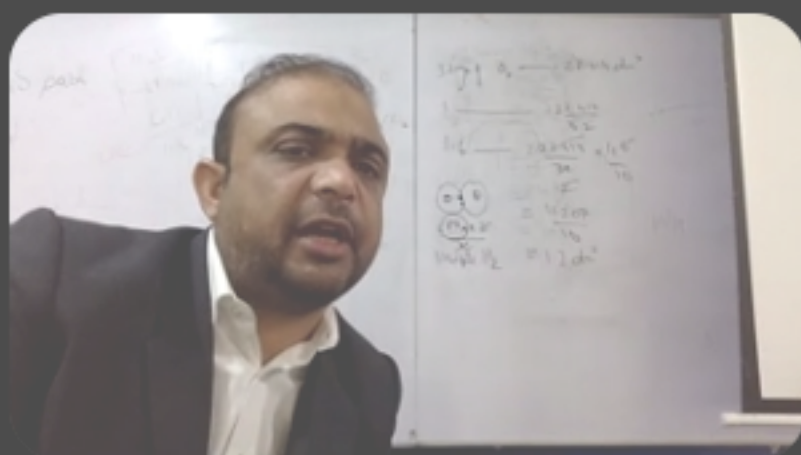
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21.

Total number of atoms present in 17g of hydrogen peroxide is ( $N = 6.02 \times 10^{23}$ ):

A)  $1.2 \times 10^{24}$ B)  $1.8 \times 10^{25}$ C)  $6.02 \times 10^{23}$ D)  $1.6 \times 10^{26}$ 

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Unmute



Start Video



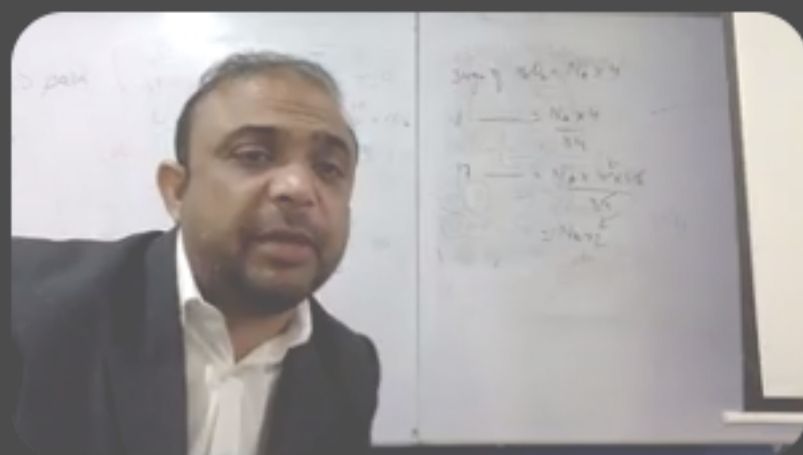
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Participants

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More



22.

0.5 mole of magnesium is burnt in excess oxygen. How much amount of MgO is produced in this reaction

(Mg = 24amu, O = 16amu)



A) 40g

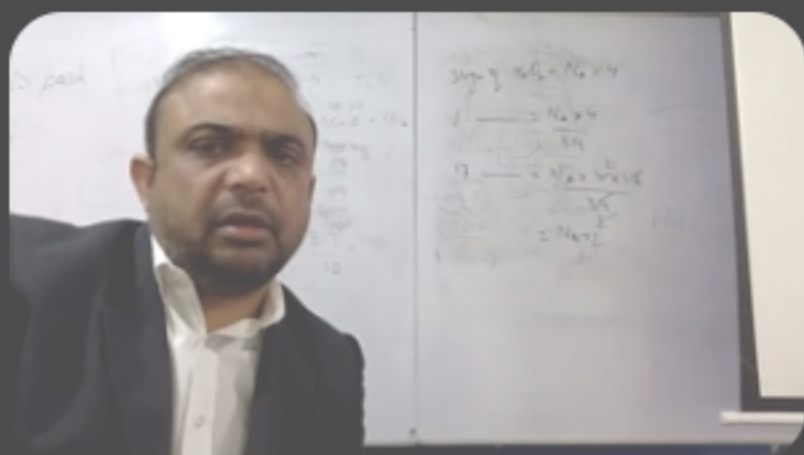
B) 20g

C) 30g

D) 15g

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23.

1. Which one of the following is a  $CO_2$  absorber?

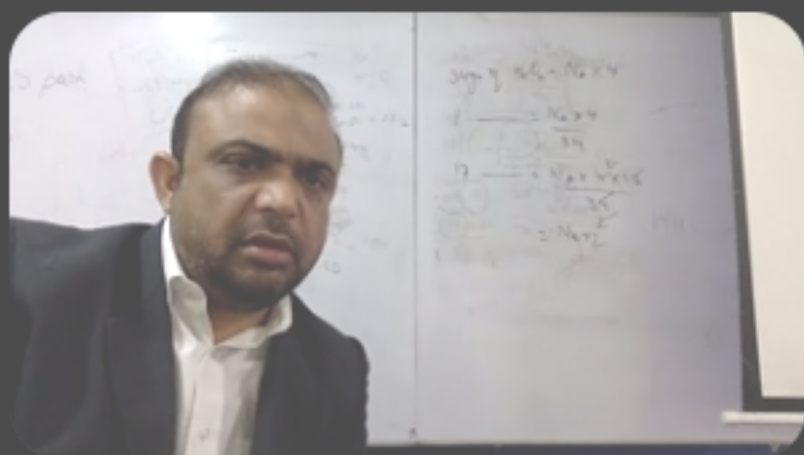
a. NaOH

b. KOH

c.  $Ca(OH)_2$

d.  $MgCl_2$

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24.

Which one of the following is **not** a water absorber?

A) *conc*  $H_2SO_4$

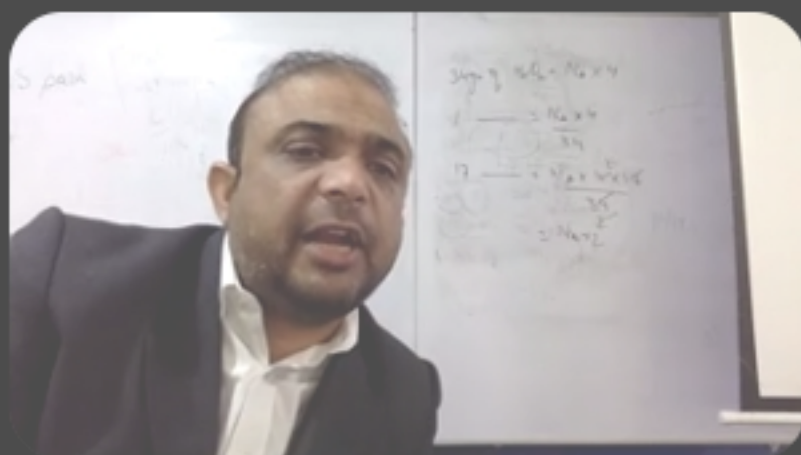
B) Anhydrous  $CuSO_4$

C)  $CaCO_3$

D)  $Mg(ClO_4)_2$

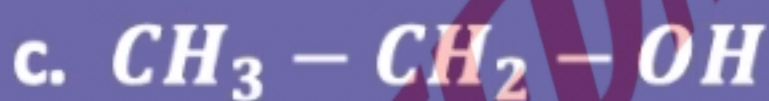
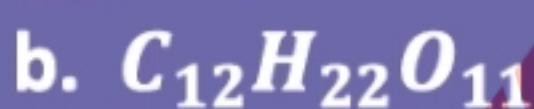
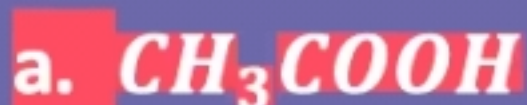
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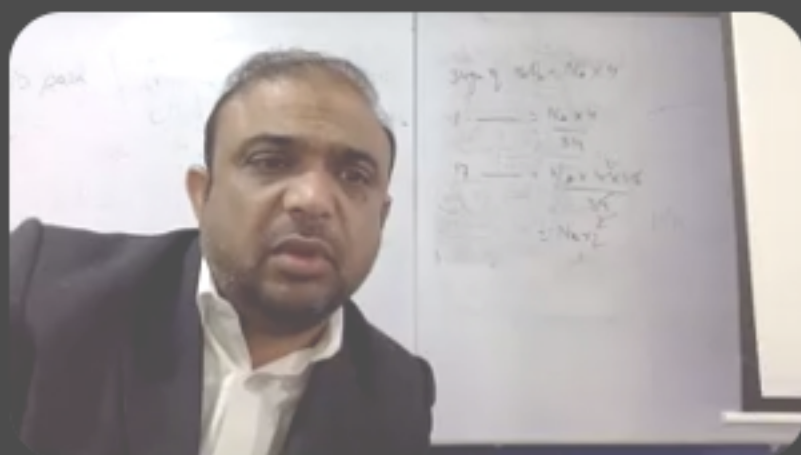




25.

Which one of the following compound doesn't have same molecular and empirical formula?

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26.

For those compounds which have same molecular and empirical formula, the value of simple multiple 'n' is?

a. 2

c. 1

b. 4

d. 3

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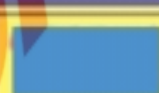




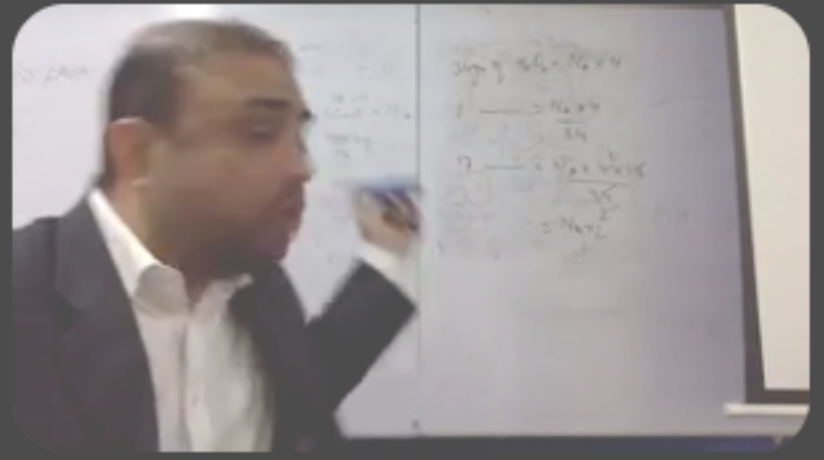
27.

The value of simple multiple 'n' is:

- a. The ratio of atomic mass and molecular mass
- b. The ratio of molecular mass and empirical mass
- c. The ratio of empirical mass and molecular mass
- d. The ratio of molecular mass and atomic mass



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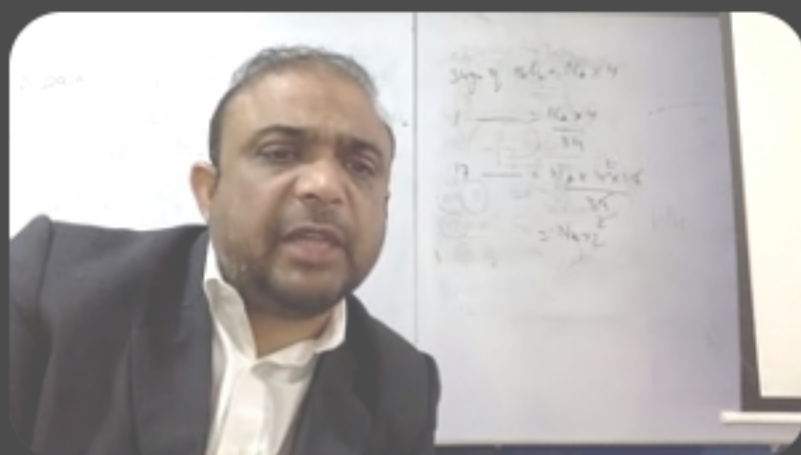
28.

One gram molecular mass of different substances expressed in grams must possess:

- a. Have different masses in them
- b. have same masses in them
- c. Some times same masses and some times different masses in them
- d. All given above

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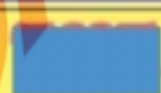




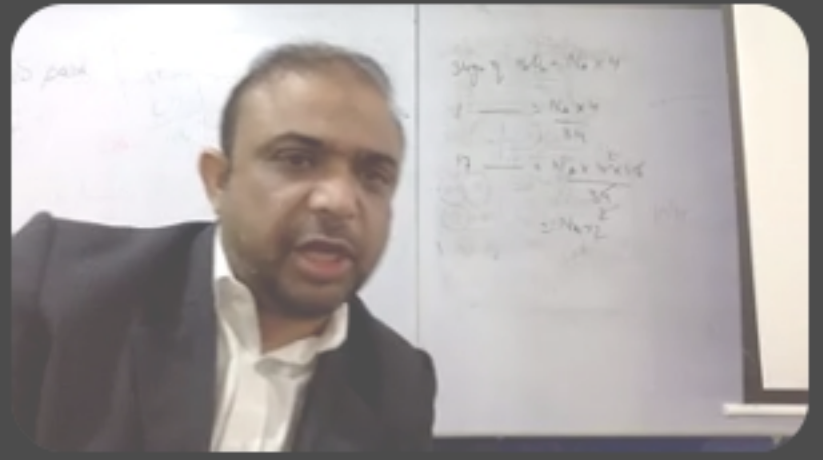
29.

One mole of different compounds has:

- A) different masses and different number of molecules
- B) same masses but different number of molecules
- C) different masses but same number of molecules
- D) same masses as well as same number of molecules



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30.

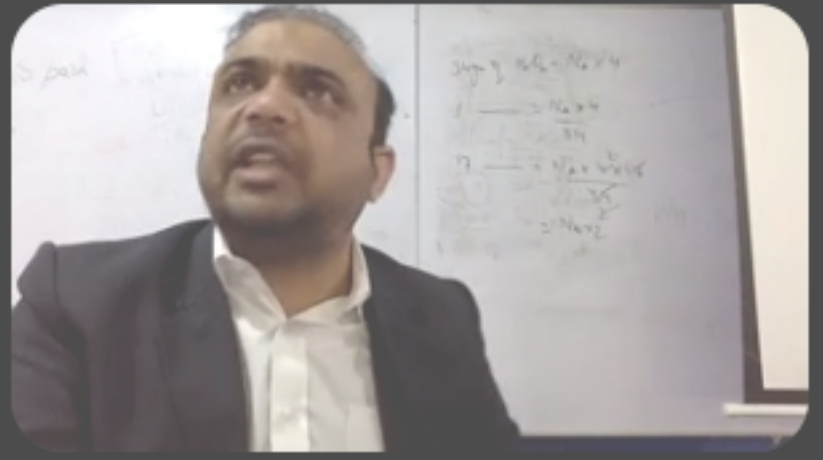
Which one of the following statement is not true about molecule?

- a. molecule can exist independently
- b. molecule is the largest particle of a pure substance
- c. molecule always consist of more than one atoms
- d. molecular size depends on number of atoms and shape of molecule



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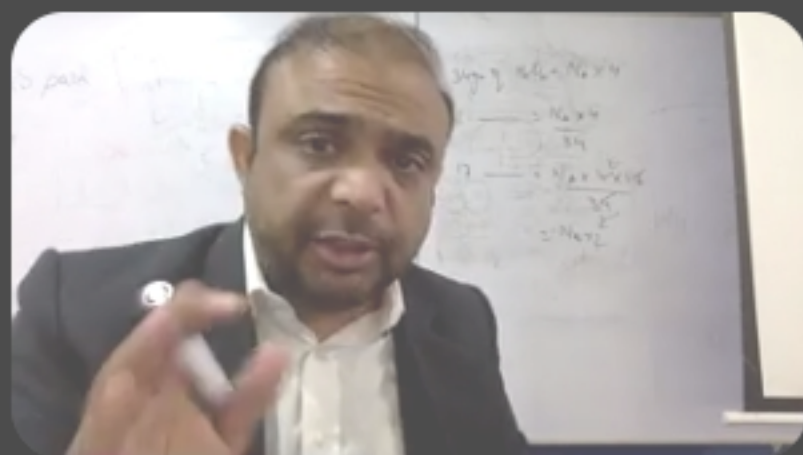


31.

Molar volumes is  $22.414 \text{ dm}^3$  it is true:

- a. only when the gas is ideal
- b. only when the gas is non-ideal
- c. for ideal gas as well as for non-ideal gas
- d. sometimes true for ideal gas and some time true for non ideal gas

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32.

One mole of an ideal at room temperature and pressure (r.t.p.) occupies a volume of:

a.  $22\text{dm}^3$

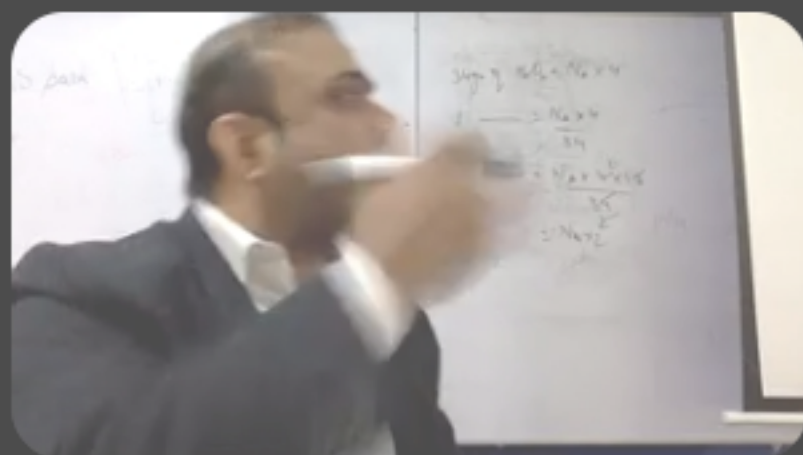
b.  $20\text{dm}^3$

c.  $24\text{dm}^3$

d.  $26\text{dm}^3$

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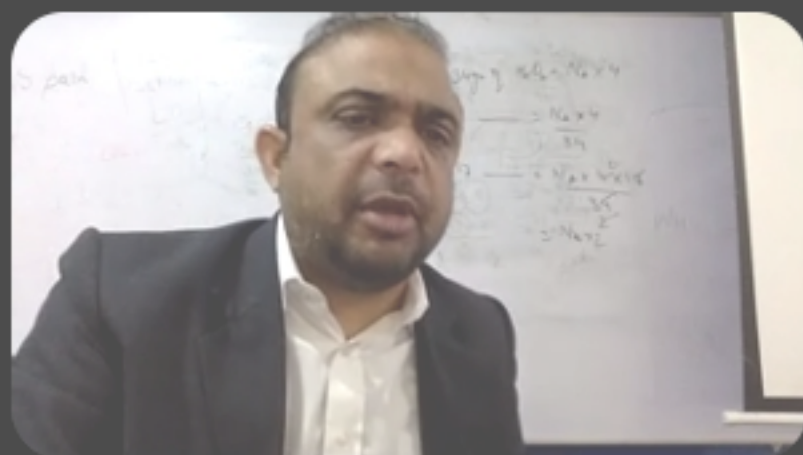


33.

$414 \text{ dm}^3$  of each gas at STP has :

- a. a same mass and same numbers of molecules
- b. a different mass and different numbers of molecules
- c. a different mass but the same number of molecules
- d. a same mass but different number of molecules

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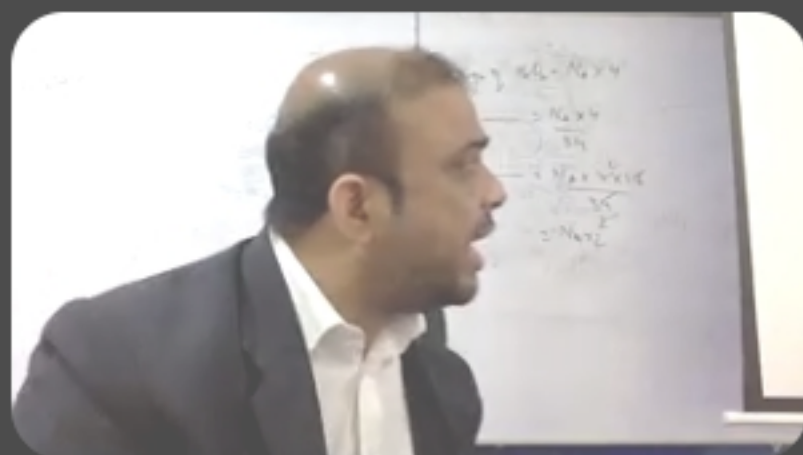
34.

Many elements have fractional atomic masses. This is because:

- a. The mass of the atom is itself fractional
- b. Atomic masses are average masses of isobars
- c. Atomic masses are average masses of isotopes
- d. Atomic masses are average masses of isotopes proportion to their relative abundance

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35.

For a reaction  $\text{X} + 2\text{Y} \longrightarrow \text{Z}$ . The amount of Z formed by starting the reaction with 5 moles of X and 8 moles of Y:

A) 5 moles

B) 8 moles

C) 16 moles

D) 4 moles

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36.

One mole of water and one mole of methane have an equal:

A) mass

B) number of atoms

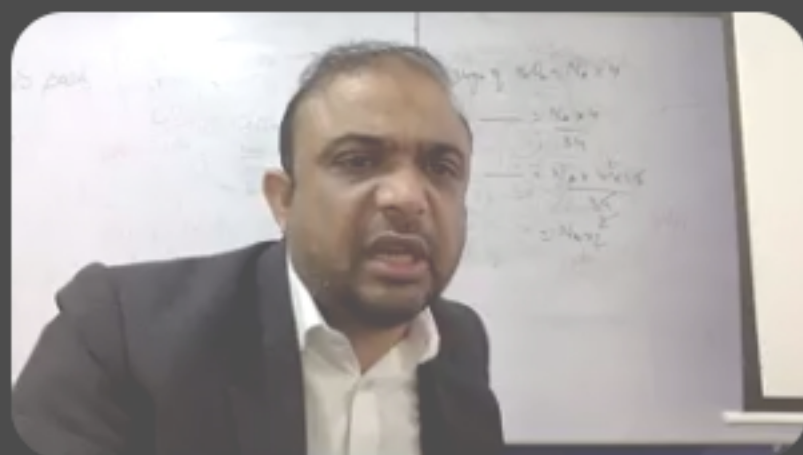
C) number of molecules

D) number of formula units



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37.

A compound has an empirical formula  $\text{CH}_2\text{Cl}$ , and molecular formula mass as  $99\text{g mol}^{-1}$ , identify the compound,

A)  $\text{C}_2\text{H}_5\text{Cl}$ B)  $\text{C}_4\text{H}_8\text{Cl}$ C)  $\text{C}_2\text{H}_4\text{Cl}_2$ D)  $\text{C}_2\text{H}_3\text{Cl}_3$ 

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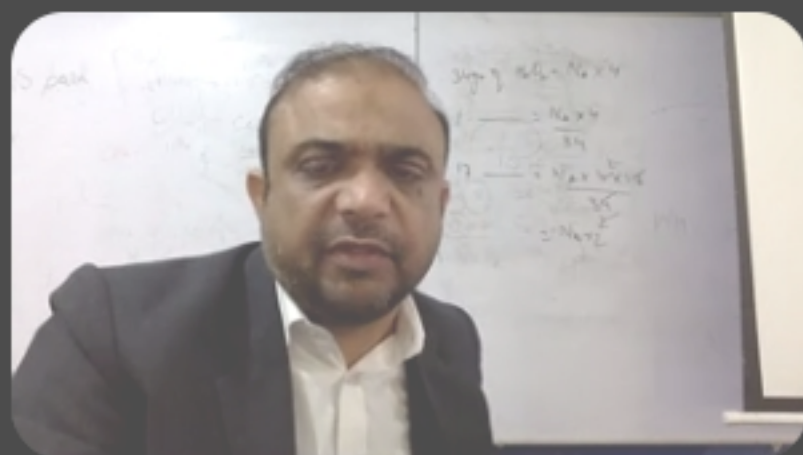
38.

The Avogadro's Number is the number of:

- a. numbers of the molecules of  $H_2$  in 1 gram
- b. number of the molecules of  $CO_2$  in 44 grams
- c. number of atoms in  $CO_2$  in 44 grams
- d. number of oxygen atoms in  $CO_2$  in 44 grams

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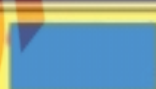


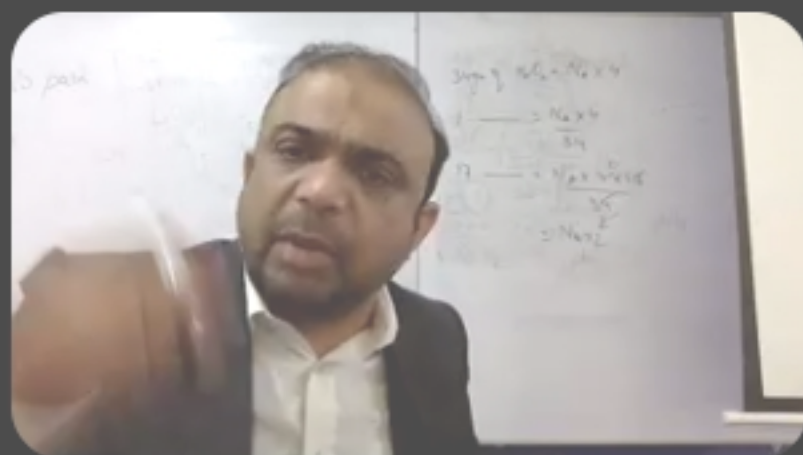


39.

The empirical formula of a compound is  $\text{CH}_2\text{O}$ . What other information is needed to determine its molecular formula?

- a. %age composition of each element in compound
- b. density of the compound
- c. relative molecular mass of the compound
- d. boiling point of the compound

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40.

100g of  $\text{CaCO}_3$  is decomposed, the  $\text{CO}_2$  produced occupies a volume at STP.

a.  $2.2414 \text{ dm}^3$ b.  $22.414 \text{ dm}^3$ c.  $22414 \text{ dm}^3$ d.  $224014 \text{ dm}^3$ 

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